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EXAMINER	
PEREZ, ANGELICA	
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APPLICATION NO./ CONTROL NO.	FILING DATE	FIRST NAMED INVENTOR / PATENT IN REEXAMINATION	ATTORNEY DOCKET NO.

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Commissioner for Patents

The reply brief filed 3/30/2006 has been entered and considered. The application has been forwarded to the Board of Patent Appeals and Interferences for decision on the appeal.

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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 09/770,074
Filing Date: January 25, 2001
Appellant(s): I'ANSON, COLIN

Paul D. Greeley
For Appellant

EXAMINER'S ANSWER

This is in response to the Substitute appeal brief filed 3/30/2006 appealing from the Office action mailed January 20, 2005. The Examiner's answer mailed May 19, 2005 is vacated.

(1) Real Party in Interest

I'ANSON, COLIN

(2) Related Appeals and Interferences

The brief does not contain a statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief. Therefore, it is presumed that there are none. The Board, however, may exercise its discretion to require an explicit statement as to the existence of any related appeals and interferences.

(3) Status of Claims

The statement of the status of the claims contained in the brief is correct.

(4) Status of the Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of the invention contained in the brief is correct.

(6) Grounds of Rejection to be reviewed on Appeal

Appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

6,493,556 B1	STINSON	12-2002
6,487,172 B1	ZONOUN	11-2002
2,328,117 A	HILSENRATH	2-1999

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stinson (Stinson Michael K., US Patent No.: 6,493,556 B1) in view of Zonoun (Zonoun, Mohammad Reza; US Patent No.: US 6,487,172 B1) and further in view of Hilsenrath (Hilsenrath, Michael; UK Patent Application No.: 2,328,117 A).

Regarding claims 1 and 22, Stinson teaches of a service system with means for effecting (column 2, lines 13-20) a method of cost-sensitive (e.g., "most economical

path" column 3, lines 37-39) control of data transfer between a mobile entity and a data network through a cellular radio infrastructure (figure 1; where figure 1 shows the cellular radio infrastructure, items 10 and 140 being mobile entities that communicate with networks 100 and 105 through "routing hub" 95), the method involving carrying out the following steps at a service system (figure 2).

Stinson does not specifically teach of receiving a transfer descriptor indicative of, at least generally, the end points of a required data transfer, and of transfer criteria to be met by this transfer, these criteria comprising at least a cost criterion; and of determining by reference to both current and future data-transfer tariffs whether and, if so, how, the data transfer can be effected within the transfer criteria where step (b) produces a positive determination, instructing initiation of the data transfer in accordance therewith.

In related art concerning packet network route selection method and apparatus, Zonoun teaches of receiving a transfer descriptor indicative of, at least generally, the end points of a required data transfer (column 3, lines 18-19; e.g., "requester's ID field" and "destination ID field"), and of transfer criteria to be met by this transfer (column 3, lines 20-29; where the criteria is "actual cost of sending the packet" and "delay in transporting the package"), these criteria comprising at least a cost criterion (column 3, lines 20-29; e.g., "actual cost of sending the packet"; where the examiner selected the "cost criterion" from the choices provided in the criteria).

It would have been obvious to a one of ordinary skill in the art at the time the invention was made to combine Stinson's method with Zonoun's transfer descriptor

indicative and transfer criteria in order to reduce the cost of data-transfer by providing specific variables such as source/destination and transfer criteria, as taught by Zonoun.

Stinson in view of Zonoun does not teach of determining by reference to both current and future data-transfer tariffs whether and, if so, how, the data transfer can be effected within the transfer criteria where step (b) produces a positive determination, instructing initiation of the data transfer in accordance therewith.

In related art, concerning least cost routing, Hilsenrath teaches of determining by reference to both current and future data-transfer tariffs whether and, if so, how, the data transfer can be effected within the transfer criteria (page 10, lines 5-14 and page 24, lines 14-17; where "it is generally cheaper to transmit information at night" corresponds to "future data-transfer tariffs"); where step (b) produces a positive determination, instructing initiation of the data transfer in accordance therewith (figure 5, item S16; where depending on the outcome of the least cost route determination, the call connection is effectuated).

It would have been obvious to a one of ordinary skill in the art at the time the invention was made to combine Stinson's and Zonoun's method with Hilsenrath's current and future data-transfer tariffs in order to obtain the least cost for data transfer, as taught by Zonoun.

Regarding claim 2, Stinson in view of Zonoun and further in view of Hilsenrath teaches all the limitations according to claim 1. In further art, Zonoun teaches where the transfer descriptor complies with one of the following instances, the instances being selected from the group consisting of: the transfer descriptor is supplied by a network-

connected resource (column 2, lines 29-30; e.g., "Internet") and concerns downloading of data from a mobile entity; the transfer descriptor is supplied by a network-connected resource and concerns uploading of data to a mobile entity (e.g., It is inherent for "internet interface" to "upload" and "download" data; column 2, lines 28-34), and any combinations thereof (e.g., It is inherent for "internet interface" perform both "upload" and "download" of data; column 2, lines 28-34).

Regarding claim 4, Stinson in view of Zonoun and further in view of Hilsenrath teaches all the limitations of claim 1. Stinson also teaches where the cost criterion specifies that the data transfer is to be effected at lowest cost consistent with the other transfer criteria, if any (column 8, lines 7-10).

Regarding claim 8, Stinson in view of Zonoun and further in view of Hilsenrath teaches all the limitations according to claim 1. In addition, Stinson teaches where the transfer criteria further comprise a minimum transfer bit rate (where "channel bandwidth" allocation depends on the "rate"; columns 2 and 3, lines 66-68 and 1-3, respectively).

Regarding claim 10, Stinson in view of Zonoun and further in view of Hilsenrath teaches all the limitations according to claim 1. In addition, Stinson teaches where step (b) involves accessing tariff data for the cellular radio infrastructure, the tariff data being available through at least one of the following mechanisms: fetched as needed over the data network from a tariff server (figure 1, item 210); provided by the infrastructure in response to a specific enquiry detailing the data transfer (column 4, lines 32-38).

Regarding claim 13, Stinson in view of Zonoun and further in view of Hilsenrath teaches all the limitations according to claim 1. In addition, Stinson teaches where step

(b) involves considering more than one cellular radio infrastructure for effecting the transfer and selecting the infrastructure that provides the lowest-cost fit with the transfer criteria (column 4, lines 1-5).

Regarding claim 14, Stinson in view of Zonoun and further in view of Hilsenrath teaches all the limitations according to claim 1. In addition, Stinson teaches, where step (b) involves considering multiple data transfer service providers for effecting the transfer and selecting the service provider that provides the lowest-cost fit with the transfer criteria (lines 5-11 of the abstract).

Regarding claim 15, Stinson in view of Zonoun and further in view of Hilsenrath teaches all the limitations according to claim 1. In addition, Stinson teaches, where step (b) involves considering more than one cellular radio infrastructure for effecting the transfer and carrying out an auction between the infrastructures to determine which infrastructure is to be used (column 4, lines 32-38).

Regarding claim 18, Stinson in view of Zonoun and further in view of Hilsenrath teaches all the limitations according to claim 1. In addition, Stinson teaches, where step (c) involves the service system contacting the infrastructure to initiate data transfer set up by the infrastructure in accordance with the determination effected in step (b) (column 3, lines 42-54).

Regarding claim 19, Stinson in view of Zonoun and further in view of Hilsenrath teaches all the limitations according to claim 1. In addition, Stinson teaches, where step (c) involves the service system effecting the data transfer through itself including by setting up a data transfer path with the mobile entity through the cellular radio

infrastructure in accordance with the determination made in step (b). (column 3, lines 55-67).

Regarding claim 22, Stinson teaches of a service system for effecting. Moreover, Stinson teaches, of a service system with means for effecting each of the method steps of claim 1(column 2, lines 13-20).

3. Claims 3, 5-7, 9, 11-12, 20-21 and 23-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stinson (Stinson Michael K., US Patent No.: 6,493,556 B1) in view of (Zonoun, Mohammad Reza; US Patent No.: US 6,487,172 B1) and further in view of Hilsenrath (Hilsenrath, Michael; UK Patent Application No.: 2,328,117 A) and further in view of Shaffer (Shaffer, Shmuel, EP No. 0,848,560 A2).

Regarding claim 3, Stinson in view of and further in view of Hilsenrath teaches all the limitations according to claim 1.

Stinson in view of Zonoun and further in view of Hilsenrath does not specifically teach where the cost criterion sets a maximum cost for effecting the data transfer.

In related art concerning quality of service at or below a threshold cost, Shaffer teaches where the cost criterion sets a maximum cost for effecting the data transfer (column 15, lines 11-14).

It would have been obvious to a one of ordinary skill in the art at the time the invention was made to combine Stinson's, Zonoun's and Hilsenrath's method with Shaffer's maximum cost for effecting data transfer in order to keep the cost of data transfer within a client's affordability, as taught by Shaffer.

Regarding claims 5 and 23, Stinson in view of Zonoun and further in view of Hilsenrath teaches all the limitations according to claims 1 and 22. In addition, Stinson teaches of serving to determine the lowest cost at which the data transfer can be effected within a delay acceptable for that cost according to the cost function (where "delay" according to Newton's Telecom Dictionary corresponds to "latency"; column 3, lines 13-17). Shaffer further teaches where the cost criteria and the delay criteria are jointly expressed as a delay-dependent cost function for which the acceptable delay before transfer can be effected decreases with the maximum acceptable cost for the transfer (column 15, lines 24-30; where present-time present time quality of service (e.g., "delay") can change in future times).

Regarding claim 6, Stinson in view of Zonoun and further in view of Hilsenrath teaches all the limitations according to claim 1. In further art, Shaffer teaches where the cost criteria and the delay criteria are jointly expressed as a set of cost functions for each of which the acceptable delay before transfer can be effected decreases with the maximum acceptable cost for the transfer successive cost functions of the set, other than a first cost function, having higher maximum acceptable cost for a given delay than a preceding cost function of the set (where "delay" is included in the "quality of service"; columns 15 and 16; lines 54-58 and 1-5), step (b) using each cost function in succession, starting with the first cost function, until a positive determination is made for effecting the data transfer at a cost which is within the function currently being used, this cost being the lowest cost at which the data transfer can be effected within a delay acceptable for that cost according to the cost function (column 16, lines 1-9).

Regarding claim 7, Stinson in view of Zonoun and further in view of Hilsenrath teaches all the limitations according to claim 1. Shaffer further teaches where the transfer descriptor indicates that the data transfer is to be repeated according to a predetermined schedule, the method involving repeating steps (b) and-(c) for that transfer descriptor according to the schedule (columns 11 and 12; lines 56-58 and 1-14, respectively).

Regarding claim 9, Stinson in view of Zonoun and further in view of Hilsenrath teaches all the limitations according to claim 1. Shaffer further teaches where the transfer descriptor references a predetermined set of transfer criteria accessible to the service system (column 12, lines 43-47).

Regarding claim 11, Stinson in view of Zonoun and further in view of Hilsenrath teaches all the limitations according to claim 1. In addition, Shaffer teaches where step (b) involves a negotiation conducted between the service system and a server representing the infrastructure (column 2, lines 46-49).

Regarding claim 12, Stinson in view of Zonoun and further in view of Hilsenrath teaches all the limitations according to claim 1. In addition, Shaffer teaches where step (b) involves specifying the required data transfer and the transfer criteria to a server representing the infrastructure and receiving back an indication of whether the infrastructure can effect the transfer as specified (column 5, lines 20-22).

Regarding claim 17, Stinson in view of Zonoun and further in view of Hilsenrath teaches all the limitations according to claim 1. In addition, Shaffer teaches where step (c) involves sending a message to one endpoint of the data transfer specifying the set

up of data transfer by that endpoint in accordance with the determination effected in step (b) (column 12, lines 12-15).

Regarding claim 20, Stinson in view of Zonoun and further in view of Hilsenrath teaches all the limitations according to claim 1. In further art, Shaffer teaches where the data transfer concerns a transfer of data to the mobile entity, the data to be transferred being passed to the service system along with the transfer descriptor where it is temporarily stored, step (c) involving initiating a transfer to the mobile entity, of the data temporarily stored at the service system (column 5, lines 8-20).

Regarding claim 21, Shaffer teaches of a method of effecting real-time regulation of data traffic through a cellular radio infrastructure, comprising the steps of (column 5, lines 48-50): (i) - effecting traffic-dependent changes to the tariff structure for data transfer through the infrastructure and making the current tariff structure accessible over to a data network (column 6, lines 43-50);

Shaffer does not specifically teach of receiving a transfer descriptor indicative of, at least generally, the end points of a required data transfer, and of transfer criteria to be met by this transfer, these criteria comprising at least a cost criterion; and of determining by reference to both current and future data-transfer tariffs whether and, if so, how, the data transfer can be effected within the transfer criteria where step (b) produces a positive determination, instructing initiation of the data transfer in accordance therewith.

In related art concerning packet network route selection method and apparatus, Zonoun teaches of receiving a transfer descriptor indicative of, at least generally, the

end points of a required data transfer (column 3, lines 18-19; e.g., "requester's ID field" and "destination ID field"), and of transfer criteria to be met by this transfer (column 3, lines 20-29; where the criteria is "actual cost of sending the packet" and "delay in transporting the package"), these criteria comprising at least a cost criterion (column 3, lines 20-29; e.g., "actual cost of sending the packet"; where the examiner selected the "cost criterion" from the choices provided in the criteria).

It would have been obvious to a one of ordinary skill in the art at the time the invention was made to combine Shaffer's method with Zonoun's transfer descriptor indicative and transfer criteria in order to reduce the cost of data-transfer by providing specific variables such as source/destination and transfer criteria, as taught by Shaffer.

Shaffer in view of Zonoun does not teach of determining by reference to both current and future data-transfer tariffs whether and, if so, how, the data transfer can be effected within the transfer criteria where step (b) produces a positive determination, instructing initiation of the data transfer in accordance therewith (figure 5, item S16; where depending on the outcome of the least cost route determination, the call connection is effectuated).

In related art, concerning least cost routing, Hilsenrath teaches of determining by reference to a current and by reference to a future data-transfer, whether the data transfer is complementary to transfer criteria (page 10, lines 5-14 and page 24, lines 14-17; where data transfer criteria is cost), and where a positive determination is produced, instructing an initiation of the data transfer (figure 5, item S16; where depending on the outcome of the least cost route determination, the call connection is effectuated), and

where the service system is used for the data transfer, the service system being connected to the data network referred in step (i) in accordance therewith (page 9, line 23-25).

It would have been obvious to a one of ordinary skill in the art at the time the invention was made to combine Shaffer's and Zonoun's method with Hilsenrath's current and future data-transfer tariffs in order to obtain the least cost for data transfer.

Regarding claim 24, Stinson in view of Zonoun and further in view of Hilsenrath teaches all the limitations according to claim 22. Shaffer further teaches where the cost criteria and the delay criteria are jointly expressed as a delay-dependent cost function for which the acceptable delay before transfer can be effected decreases with the maximum acceptable cost for the transfer (column 15, lines 24-30; where present-time present time quality of service (e.g., "delay" can change in future times), Shaffer also teaches of successive cost functions of the set, other than a first cost function, having higher maximum acceptable cost for a given delay than a preceding cost function of the set (where "delay" is included in the "quality of service"; columns 15 and 16; lines 54-58 and 1-5), Shaffer also teaches of the determination device being arranged to use each cost function in succession, starting with the first cost function, until a positive determination is made for effecting the data transfer at a cost which is within the function currently being used, this cost being the lowest cost at which the data transfer can be effected within a delay acceptable for that cost according to the cost function (column 16, lines 1-9).

(10) Response to Arguments

4. Applicant's arguments with respect to claims 1-15 and 17-24 have been considered but they are not persuasive:

In the remarks, the applicant argued in substance:

(A) On page 15, paragraph 2, "...Stinson, Zonoun, Hilsenrath, Shaffer and the combination thereof do not disclose or suggest any method...determining by reference both current and future data-transfer tariffs... does not disclose..."

In response to argument (A), the examiner pointed out and further explained in Hilsentrath, page 10, lines 5-14 and page 24, lines 14-17). E.g., Users are informed of the current tariffs for determined services as well as tariffs for future times such as nightly rates, weekend rates, times when data transfer traffic is light, etc., therefore, the user can refer to the tariff information provided and select the best time for data transfer service depending on at least the least cost available.

(B) On page 9, paragraphs 4 and 5, "Appellant submits that according to the Telecommunication Union and Standard 1037C, latency is defined to one of ordinary skill in the art as "an inherent delay of the communication path or a transmission delay through a communication path" One of ordinary skill in the art would understand the element latency from this particular definition or as a delay through a path."

Page 9, paragraph 4, "Notwithstanding, the Office has stated that the term "latency" is interchangeable with any delay. Appellant respectfully disagrees..."

Page 10, paragraph 2, "The Office also states that "transmission delay through a communication path" can be interchangeably used as "criteria to be taken into

consideration" and thus as an acceptable delay before transfer initiation. See Final Office action at page 3. However, this is not found in any reference..."

Page 11, paragraph 3, "There is simply no articulation or suggestion in Stinson or any reference ...the delay criterion being indicative of an acceptable delay before transfer initiation."

Page 15, paragraph 2, "Stinson, Zonoun, Hilsenrath, Shaffer and the combination thereof do not disclose or suggest any method...and a delay criterion indicative of an acceptable delay before transfer initiation..."

In response to argument (B), the examiner would like to point out that at least Stinson, Zonoun and Hilsenrath teach of "a delay criterion being indicative of an acceptable delay before transfer initiation."

Stinson teaches in columns 2, 3 and 5, lines 59-67, 6-18, and 14-23, 5-45, respectively; figures 3 and 4, the examiner considers an acceptable delay as a quality of service. The quality of service already factors in parameters such as maximum latency of the communication path, a maximum number of errors induced by the effects of the selected communication path (such as a bit error rate), or the minimal acceptable bandwidth of the communication path, selected communication bandwidth whose factors incur a delay (column 3, lines 6-18).

Knowing that the calculation of quality of service factors in variables such as error rate, minimum acceptable bandwidth of the communication path, number of users, time of day, delay, bit error rate etc. Therefore, these factors provide an approximate time delay for transferring of data before communication is commenced.

In addition, Zonoun teaches of "a delay criterion being indicative of an acceptable delay before transfer initiation."

Zonoun teaches in columns 3, 5 and 7, lines 23-28; 15-23, 52-58 and 55-65, respectively. E.g., The metric will contain values, which the requester can use to select the path. For example, since **cost** and **delay** values are utilized in the preferred embodiment, the requester can choose the best route as the least costliest path or as the fastest path" (column 3, lines 23-28);

"For example, company A can select the **least expensive** route. This approach might be desirable when sending text data packets to company B. However, for telephony communication where real time conversation is more critical, the path with the **least delay** might be more attractive" (column 5, lines 15-23 and 52-58).

"...**cost** and **delay** values are included within the routing metric. The cost value is the cost in **monetary terms**...while delay is measured in terms of **time**...the **host can determine which path provides the most cost savings or which path provides the least delay**..." (column 7, lines 55-65).

For the above reasons, it is believed that the rejection should be sustained.

(11) Related Proceedings Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

Respectfully submitted,

Art Unit 2684

May 16, 2005

Conferees:

Nay A. Maung (Supervisory Patent Examiner)

Edward Urban (Supervisory Patent Examiner)

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